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APPLICATION NO. .	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,257	10/16/2003	Juan-Antonio Carballo	AUS920030655US1	9980

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DILLON & YUDELL LLP  
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AUSTIN, TX 78759

EXAMINER
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BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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07/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/687,257

Applicant(s)

CARBALLO, JUAN-ANTONIO

Examiner

Kevin M. Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

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1. This office action, in response to the amendment filed 5/29/2007, is a final office action.

***Response to Arguments***

2. The previous objection to the drawings is withdrawn. The drawings were received on 5/29/2007. These drawings are acceptable.

3. Applicant's arguments filed 5/29/2007 have been fully considered but they are not persuasive. Applicant states Rhee does not teach or suggest a test advisor configured to output a recommendation regarding a communication problem based on the BER and the at least one jitter characteristic. The examiner disagrees. The DLL 20 determines if the BER is optimized or not as stated in the previous office action. This is the debug unit. The DLL comprises a phase detector and charge pump as shown in figure 2. These elements will output recommendations regarding problems based on the input data and clock signals. The problems are phase differences present in the phase detector. The charge pump will output a control signal to adjust the data signal to correct the phase difference. This correction will optimize the BER. The phase detector and charge pump comprise the test advisor included in the debug unit. When the phase detector outputs an error signal, the BER is not optimized and a correction is required. This is the corrective action.

For these reasons and the reasons stated in the previous office action, the rejections of the claims are maintained and stated below.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9, 11-16, 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Rhee et al (US 2003/0227989).

Regarding claims 1, 11 and 18, Rhee discloses a receiver in a data processing system shown in figure 2 (paragraph (0004)). The received signal is converted and input to PLL 10. The signal comprises a clock signal and a data signal to optimize the bit error rate (BER) (paragraph 0034). The receiver of figure 2 extracts the clock signals and the data signal. The delay locked loop 20 determines if the BER is optimized or not (paragraph 0034) and provides short term jitter tracking (figure 2). The components of the DLL output signals based on these determinations.

Regarding claim 2, the transmitter receives the data over a communication link from a pattern generator generating the data shown in figures 6a and 6b.

Regarding claim 3, the receiver receives non-return-to zero data (paragraph 0004) that is converted to parallel data (paragraph 0020).

Regarding claims 4, 6-8, 12-15 and 19, Rhee discloses optimizing the BER. When the BER is not optimized, an additional correction will be made to correct for the error.

Regarding claim 5, Rhee further discloses the present invention controls the clock-and-recovery performance metrics in terms of jitter tolerance in the present invention (paragraph 0034).

Regarding claims 9 and 16, Rhee further discloses using a phase rotator to compensate for jitter in the receiver (paragraph 0043).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee et al (US 2003/0227989) in view of Perrott (US 6,856,206).

Regarding claims 10, 17 and 20, Rhee discloses the apparatus stated above. Rhee does not disclose a look-up table containing entries having an associated BER value to facilitate corrective action recommendation. Perrott discloses the table shown in figure 27a having the various ranges of bit errors being assigned a digital value (column 18, lines 47-68). The table will allow the proper signal to be output to correct for the bit error. The desired clock signal will be output. For this reason, it would have been

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obvious for one of ordinary skill in the art at the time of the invention to combine the look-up table of Perrott into the apparatus of Rhee.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

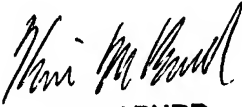
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd  
7/25/2007

  
**KEVIN BURD**  
**PRIMARY EXAMINER**